JUMBO MINING CO.

Received DOGM 2/3/89

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January 25, 1989
File: OGMRECL

Mr. Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program
Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Braxton:

Re: Your letter dated December 6, 1988: Initial Review of M/023/013
DRUM MINE RECLAMATION ESTIMATE

Referring to the memo dated Dec. 5, 1989 from Scott Johnson to Wayne Hedberg, which encloses a reclamation "estimate" which "should be used as a guide until adequate information is furnished by Jumbo Mining", please find attached our suggested revisions to the "estimates". For ease of comparison we have used the same format and show the estimates (under the heading, "EST") alongside our revisions (under the heading "REV").

Attached to the comparison table are two pages of footnotes which explain the basis of each of our proposed revisions. In addition to these explanations, please also refer to our response to "TECHNICAL CONCERNS", wherein we have requested several variances which impact directly upon the reclamation estimates.

As you will see from the attached comparison and the accompanying footnotes, the biggest differences between the Division's estimate and our figures are derived from the fact that a substantial amount of reclamation work has been completed by Western States subsquent to their cessation of mining activities in 1987. Western had completed the berms along the highwalls around the pits, had graded many areas in preparation for reseeding, cleaned up trash throughout the property, removed a 3200 sq.ft. building, and demonstrated the efficient reduction in alkalinity and cyanide concentrations, in the process of decommissioning of the heap leach pads, by the process of continued sprinkling onto the heaps, without the addition of makeup reagents.

While the above listed items account for the biggest part of the difference in our figures, one other item is of significance throughout. In the two years since mining stopped, we have been able to observe the excellent results achieved in the area as a result of natural reseeding, on both ore and waste areas, without the addition of mulch, fertilizer, or new seed. In addition, this winter Jumbo has added several acres of test plots on tops of waste dumps, where the hard packed surfaces were scarified only, and seed hand-cast over the areas. These will be compared with the naturally reseeded areas, to further prove the ability of the soils derived from the ores to support vegetation similar to that

which was present before the area was disturbed.

We believe this last point to be very significant in view of the lack of topsoil in the area, and our reluctance to destroy other slow growing bushes and trees in the area in order to "rob" topsoil to needlessly cover waste dumps, etc. Environmentally, we believe this to be counter productive in this area.

The physical evidence at the site, as illustrated by the photographs attached, strongly points to the folly of this requirement.

Sincerely,

E. B. King

cc: F. Rex Rowley, BLM, House Range Resource Area
Don Osler, State Health
Jerry Mansfield, State Lands

REVISED DRUM MINE RECLAMATION ESTIMATE--JUMBO MINING COMPANY

File: OGMRECLAM
Jan 24, 1989

EST= OGM letter dated 12/6/89; REV=Jumbo Updated Figures.
See notes below for comments on revisions.

DESCRIPTION	QUANTITY		UNITS	$/UNIT		COST ($)	
	EST	REV	BOTH	EST	REV	EST	REV
Drum Mine Pit & Decline Reclamation							
1) Remove trash	32.7	5	acres	100	100	3270	500
2) Construct berms on highwalls	4800	0	feet	4.7	0	22560	0
3) Construct Seal 100' in portal		0	total	0	0	1000	1000
4) Backfill portal	400	400	cuyds	0.6	0.6	240	240
5) Grade for uniformity	21	0	acres	430	430	9030	0
6) Revegetate	21	11.85	acres	381	163	8001	1931.5
Subtotal						44101	3671.5
HEAP LEACH PAD RECLAMATION							
7) Decommission heap leach pads	41	42.6	acres	750	0	30750	0
8) Remove trash from tops of heaps	41	42.6	acres	100	0	4100	0
9) Grade pads to minimize erosion	41	42.6	acres	430	0	17630	0
10) Haul topsoil	10000	10000	cuyds	0.6	0.6	6300	6300
11) Regrade topsoil for uniformity	41	41	acres	143	143	5863	5863
12) Revegetate	41	42.6	acres	381	163	15621	6943.8
Subtotal						80264	19106.
DRUM MINE WASTE DUMPS RECLAMATION							
13) Remove waste trash	40	25.5	acres	100	100	4000	2550
14) Grade for uniformity	29.6	5	acres	430	430	12728	2150
15) Revegetate	29.6	25.5	acres	381	163	11277.	4156.5
Subtotal						28005.	8856.5
FACILITIES RECLAMATION							
16) Demolish & dispose of buildings	8200	5000	sqft	2.9	2.9	23780	14500
17) Remove fenceline	15030	15030	feet	1.2	1.2	18787.	18787.
18) Plug drill holes	30	30	each	100	100	3000	3000
19) Remove trash	40	40	acres	100	100	4000	4000
20) Rip roads	25.4	23.3	acres	275	275	6985	6407.5
21) Grade for uniformity	40	10	acres	430	430	17200	4300
22) Revegetate	40	23	acres	381	163	15240	3749
Subtotal						88992.	$ 54744
Total all items						241363	$ 86378.
Add Contingency 10%						24136.	$ 8637.8
TOTAL RECLAMATION COST 1988 DOLLARS						265499	$ 95016.
TOTAL RECLAMATION COST 1993 DOLLARS @ 2.3% ANNUAL INFLATION						296828	$ 106228

Notes to accompany REVISED DRUM MINE RECLAMATION ESTIMATE
--JUMBO MINING COMPANY

MINE PITS & DECLINE

1) Remove trash: Western States had cleaned trash from pit areas before the property was sold to Jumbo. The reduced five acre estimate is believed to be ample to cover the smaller areas which will be mined by Jumbo.

2) Berms on highwalls: This work also was completed by Western during their operation and after they ceased mining activities. If any new areas are opened up by Jumbo, highwalls will be constructed DURING the operating period as required by MSHA, BLM, and other regulatory authorities.

3) Seal on portals: No change from estimate.

4) Backfill portal: No change.

5) Grade for uniformity: All areas within the Pit which will be revegetated are graded, being ramps, roadways, and benches. The cost of scarifying these is included in the Revegetation cost given below.

6) Revegetate: Experience has indicated that the costs for native hay mulch and its application are not needed for this area and soil. Please refer to photographs of the results of natural reseeding, etc. The deletion of costs for hay mulching reduces the cost of revegetation from $381 to $163/acre. The actual measured area of roads, benches, and ramps which are safely accessible for reseeding is 11.85 acres, as shown on the attached maps.

HEAP LEACH PADS

7) Decommission heap leach pads: For this particular ore we have determined that cyanide levels can be reduced rapidly and efficiently to acceptable levels by ceasing the additions of lime and cyanide and continuing the sprinkling processes. The neutralization of the remaining alkalinity by the carbon dioxide absorbed from the air reduces the pH of the solutions within a short period of time to approximately 8.0-8.5, and cyanide concentrations are reduced by oxidation/evaporation to below 0.2 mg/l. Most of the solution remaining on shut down will be evaporated in the sprinkling process; that which remains in the bottom of the sumps will be cleaned out along with residual mud and carbon for gold recovery.

8) Remove trash from tops of heaps: No trash has accumulated on heap tops, or has been cleaned up by Western. It is not our practice to allow for anything on top of heaps except for piping and sprinkler systems, and these will be salvaged for reuse on other heap leach systems, prior to commencement of reclamation activities.

9) Grade pads to minimize erosion: None of the existing pads show any sign of erosion after approximately four years of exposure to the equivalent of a very heavy rainfall (the sprinkling system is the equivalent of about 3" rainfall per day, day in and day out for months at a time in addition to any cloudbursts which might have occurred in the area). The pads are nearly level on top and are designed to have a high drainage/percolation capacity, so that no "runoff" may be expected. This applies also to the side slopes. No erosion or sloughing is evident on the side slopes of any of the ten heaps which have been built.

10) Haul topsoil: No change. The topsoil that has been stockpiled will be redistributed to areas where it might be needed to assist revegetation.

11) Regrade topsoil: No change.

WASTE DUMPS

12) Revegetate: The acreage has been increased slightly to meet the most current measured areas, and the cost/acre has been reduced to eliminate the mulching costs as discussed above.

13) Remove waste trash: The acreage has been reduced to current measurements.

14) Grade for uniformity: Acreage has been reduced to that area which may need grading. The rest of the area has been graded or can not be graded practically as discussed elsewhere.

15) Revegetate: Area has been reduced to current measurements, and the cost of mulching has been eliminated.

FACILITIES

16) Demolish and Dispose of buildings, etc.: A 3200 sq.ft. building was removed by Western States, reducing the remaining buildings to 5,000 sq.ft.

17) Remove fenceline: No change. Since the salvage value of the fence and posts will exceed the cost to remove it, however, we question the ground rules which require the posting of $18,787 bond to pay for its removal.

18) Plug drill holes: No change.

19) Remove trash: As this will cover the entire area used, which is not otherwise provided for, No change.

20) Rip roads: Minor reduction to conform to updated area measurements.

21) Grade for uniformity: Reduction to account for updated measurements of areas which may require grading.

22) Revegetate: Updated area measurement and elimination of mulching cost account for the reduction.